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ABSTRACT

A study examined the impact of assuming the role of action researcher in one's own classroom as an example of inquiry-oriented, professional staff development. The study was a part of a comprehensive, longitudinal investigation of the impact of certain professional development experiences on K-12 classroom teachers. A review of the literature and interviews and questionnaire results of teachers who had been involved in a classroom based action research project sought to determine: (1) ways that teachers were influenced by reflectively analyzing their own practices in light of research regarding the teaching-learning process; (2) the impact of the teachers' attitudes toward doing research, reading research, and using the results of research; and (3) the suitability of certain data collection techniques for investigating teacher experiences and beliefs regarding the relationship of educational research and their classroom practices. The teachers felt that there have been positive increases in their knowledge and skills in the following areas: (1) effective teaching-learning; (2) research; (3) reflective thinking habits; (4) the need for continuing professional development; and (5) overall effectiveness as teachers. (CB)

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EXPLORING THE RELATIONSHIP BETWEEN RESEARCH & PRACTICE: THE IMPACT OF ASSUMING THE ROLE OF ACTION RESEARCHER IN ONE'S OWN CLASSROOM

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by

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INTRODUCTION

Perspective taken by this study: Conventional efforts to use educational research as a tool to improve instructional practices in the K - 12 classroom have suffered from at least three shortcomings: (1) a simplistic view of regarding research and its findings as the source of solutions which should be applied literally in every classroom setting, (2) a victimization view of the classroom practitioner as needing to be told what to do, and thus, needing remedial staff development and/or supervision, and (3) a seemingly unbridgeable chasm existing between typical classroom practitioners and typical educational researchers' language, concerns, criteria, and activities.

Indeed, a close analysis of the language which has been traditionally used reveals much about what has been described as a "top down" model of staff development and school improvement---e.g. research as the source of solutions for instructional problems, literal application of research findings as rules for effective classroom practice, a remedial/needs-based/deficiency-based view of the teacher education and staff development process, school reform, researchers needing to negotiate access to schools and classrooms, theory into practice, and so forth.

These attitudes and efforts have persisted in many places despite the cautions expressed over the years by educational researchers and philosophers (e.g. Buchmann,1983; Cronbach, 1957, 1975; Fenstermacher, 1978; Heath & Nelson, 1974; Phillips, 1980) concerning the difficulties and inappropriateness of attempting to directly relate research, and particularly its findings, with educational practice and policy.

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More recently, this traditional view of the appropriate relationship between educational research and classroom practices has begun to be questioned as the complexity of effective teaching, schooling, and staff development processes has been more adequately investigated and acknowledged. This has been stimulated in part by the programatic and political insights gained from the teacher center movement (e.g. Devaney, 1977), the use of more sophisticated aptitude-treatment interaction (ATI) staff development research methodology (e.g. Mohlman, Coladarei & Gage, 1982), and the lessons being learned from the literature regarding cognitive development (e.g. Oja, 1980), teacher development (e.g. Bents & Howey, 1979), implementation of innovations (e.g. Berman & McLaughlin, 1976).

This gradually emerging shift in thinking about the appropriate relationship of research and practice and about staff development processes and outcomes has been also paralleled by the recent attention given to the conditions thought to be necessary for professional practice by classroom teachers---e.g. an improved knowledge base and increased autonomy for professional decision-making (e.g. Lanier, 1982, 1984).

Focus of this study: This study is part of a comprehensive, longitudinal investigation (Simmons, 1984a) which has been designed and is currently being pilot-tested to determine the impact of certain professional development experiences on K-12 classroom teachers. These professional development experiences involve: (1) analytical study of the teaching-learning process occurring in their own classrooms using frequent and incrementally more comprehensive data gathering and professional self-analysis exercises, (2) opportunities for networking among teachers from different backgrounds and work settings, and (3) a culminating action research project done in their own classrooms.

This particular exploratory study has been guided by the following questions:

(1) In what specific ways do these classroom teachers report that they have been influenced by the experience of reflectively analyzing their own practices in light of research regarding the teaching-learning process?

(2) What is the impact on these classroom teachers' attitudes toward doing research, reading research, and using the results of research?

(3) How suitable are these data collection techniques for investigating classroom teachers' experiences and beliefs regarding the relationship of educational research and their classroom practices?

Importance of this study: The exploratory and naturalistic nature of this study is underscored by the equal attention being given to: (1) developing and pilot-testing staff development program research/evaluation methodology which would be both adequate and practical as well as (2) the actual findings which are obtained concerning how this group of teachers has been influenced by attempting to relate educational research and their classroom practices.

Both of these sets of answers should provide the basis for planning further investigations into the process and outcomes of inquiry-oriented staff development (Simmons, 1984a) as well as provide some data-based insights into the complex issue of the relationships between educational research and classroom practice which are

possible and meaningful from the perspective of the classroom practitioner. The conclusions of this study should reveal new frameworks and questions for investigation. Given the crucial role which the classroom teacher, both individual and collectively, plays in instructional improvement efforts and in the emergence of teaching as a profession, the insights and actual experiences of such classroom teachers should provide a valuable perspective and contribution to better understanding these staff development processes.

The overall staff development program research/evaluation effort (to which this study is related) has been designed to explore answers to specific questions in four thematic categories:

(1) what is the impact of this long-term, developmentally organized experience of reflectively analyzing participants' own classroom practices in light of educational research concerning effective learning/teaching/schooling?

(2) what changes occur in participants' own professional self-assessment and the criteria they use (i.e. their understanding of what it means to be an effective classroom teacher)?

(3) what changes occur in participants' individual and collaborative use of professional development opportunities and resources?

(4) what type of staff development processes and what contextual considerations are appropriate, given the program goal of professionalizing classroom teachers?

This line of investigation, then, seeks to focus on better understanding: (1) the relationship of research with classroom teaching and staff development practices, (2) changes which occur in the criteria and goals which classroom teachers identify for themselves through ongoing professional self-assessment of their practices, (3) classroom teachers' use of individual and collaborative professional development opportunities, and (4) the process of staff development which has the professionalizing of classroom teachers as its goal.

REVIEW OF THE LITERATURE

This literature review will be organized according to the following two categories: (1) issues surrounding the role of research within teacher education/staff development programs; and (2) action research and inquiry-oriented professionalizing teacher education/staff development.

Issues surrounding the role of research within TE/SD programs: Despite the dissemination and demonstration efforts of the past 25 years, concern for the rather weak influence of educational research on K-12 school policies and practices is frequently expressed. The focus of this study is on the parallel and related question regarding the role of research in teacher education/staff development (TE/SD) programs. In general, the research which is relevant may involve either that which is increasingly available regarding what is known about effective teaching-learning-schooling processes or that which focuses on TE/SD program effectiveness. In this case, the role of research will be examined in relation to (1) the faculty, (2) the goals, (3) the curriculum development process, and (4) the explicit as well as hidden curriculum of TE/SD programs.

Recent evidence that this is an important question to investigate is apparent from several perspectives, including various isolated studies and articles, three thematic issues of the Journal of Teacher Education published during the last nine months, and in the proceedings of the 1984 national invitational conference which focused on future directions and initiatives needed in the areas of policy, research, and teacher education practices (Hord, O'Neal & Smith, 1985).

Before examining these issues, however, it is important to clarify the possible roles which can exist between research and practice. These range along a continuum from using research, particularly its findings, to identify rules for effective practice to, at the other extreme, using research to stimulate reflective dialogue, analysis and continuous experimentation concerning effective classroom practices (Clark, 1984; Simmons & Sparks, in press). In the latter case, research constructs, questions, assumptions and limitations, models, methodology, findings, and the researchers' own examples all become powerful tools for expanding thinking and action, for examining the meaning and function of the common-place in classroom teaching and in TE/SD practices which has been previously unexamined on a more conscious level.

In this way, educational research becomes, not a source of prescriptions for practice, but rather a tool to help a classroom teacher think about the teaching-learning process occurring in his/her own classroom. Any particular piece of relevant research becomes a stimulus that can help enrich a teacher's thinking (e.g. his/her "map" of effective instruction) and suggest alternative actions that could be taken.

This view builds also on what Joyce and Showers (1983) have emphasized as the central problem of transfer remaining yet in staff development programs, i.e., in teachers knowing when to use new practices and how to use them appropriately for different students, settings, and curriculum goal structures. A dual notion of the "mutual adaptation" process proposed by Berman & McLaughlin (1976) can be used to explain what occurs here, too. As a teacher comes to know and then to use a new practice, that practice is adapted to fit the teacher's own circumstances. However, we are beginning to have evidence (Oja, 1980) that a teacher's own thinking about the elements of the teaching-learning process and about him/herself and the students also has changed during this process of staff development. In light of the emphasis coming to be placed on teachers as instructional decision-makers, we could even hypothesize that unless the teacher's way of thinking and looking at what happens in the classroom is changed, little lasting improvement in actual classroom practice is likely to occur (Simmons & Sparks, in press).

It is important to re-emphasize that consideration of research focusing on effective teaching-learning-schooling practices is not the only relevant or important factor that should be used to stimulate teachers' reflective analysis of their practices. Knowledge of educational policies, community values, students' developmental characteristics and needs, subject matter and educators' own beliefs and needs are all relevant and necessary material for reflective analysis in a comprehensive TE/SD program. However, the outcome being emphasized here is one of the teacher as autonomous, committed, inquiring, instructional decision-maker, rather than as one who blindly follows prescriptions from either research, policy, or community mores. As Buchmann (1983) emphasizes, an illusion of "right answers" and "conclusions" in research can obscure the real process of research as question asking and can,

indeed, have the ironical effect of inhibiting the development of thinking and inquiring skills in teachers and of their sense of their own efficacy as decision-makers and decision-implementers.

That these are more complex goals and outcomes than have characterized most TE/SD staff and their programs is the next focus of this literature review. First, we will consider the professional knowledge, skills, and attitudes which teacher educators/staff developers possess in the face of this challenge. When the background, values, and activities of teacher educators and staff developers themselves are examined, what is perhaps most salient is the very genuine tension which exists for this group and their work between the norms of academia, on one hand, and those of a professional school perspective on the other hand. Lanier (1984) begins her research review on the background of teacher educators by describing the very difficulty of identifying clearly who teacher educators/staff developers are, depending on whether this group is defined broadly in terms of involvement in teaching teachers in some way or in terms of the more narrowly circumscribed group for whom this is their principal activity.

Lanier reviews the literature primarily in terms of the more limited group of university-based teacher educators who hold traditional positions in colleges and departments of education across the country and of their characteristics in relation to their other colleagues in academia. The theme which emerges from her review is that this group is held in low esteem and relegated to the lower end of the academic stratification ladder by others in academia, possesses lower traditional scholarship commitments and interests, and de-values intellectual questioning and conceptual analysis.

> Of those responsible for teaching teachers in higher education, the most prestigious are those most removed from dealing with teacher education's problems. The thesis emerging from the research is that variables associated with social class distinctions in the larger society are simply mirrored in universities and again in colleges and departments of education. Those variables are potentially of major importance in understanding the intellectual character and social position of these most closely associated with teaching and teacher education.
>
> A disproportionately large number of faculty teaching teachers most directly have come from lower middle class backgrounds. It is very likely that they obtain conformist orientations and utilitarian views of knowledge from their childhood experiences at home, educational opportunities in school, and restrictive conditions of work as teachers before coming to higher education. Thus, the teacher educators closest to schools and prospective and practicing teachers often assume professional work assignments and routines that demand minimal intellectual flexibility and breadth and require, instead, conformity and limited analysis. (p. 29)

In advancing a professional school perspective for TE/SD, Howsam, Corrigan, Denmark, and Nash (1976) distinguish between those who are involved in the search for knowledge (i.e. researchers), those who are concerned with knowledge application (i.e. developers), and those who are knowledge users (i.e. practitioners). They recommend that teacher education be identified as a professional school within the larger university so that role expectations for it would be clearer and more appropriate. The role of researchers in the disciplines is "to contribute to the pool of valid knowledge upon which the professions depend" (p. 59). In a related way,

> The professional schools value and undertake research and scholarship, but emphasize the search for socially useful applications of knowledge to professional problems; address the reality represented by the profession by drawing on the contributions of multiple disciplines as well as their own technical culture; place value on and reward those activities which have direct application to the problems of professional practitioners; relate to their own professional faculties and to practitioners as significant referent groups; embrace a concern for the practical utility of knowledge without denying the importance of the knowledge itself; and display the skills and characteristics of professionals who must work with "real world" constituencies. (p. 58-59)

To the extent that this professional school perspective is an accurate description for teacher educators and staff developers, it would seem that the relevant research expertise for TE/SD is that which concerns effective teaching-learning-schooling processes in K-12 settings and that which focuses on TE/SD program effectiveness. Such a perspective also underscores the subtle, ambiguous, multidimensional nature of TE/SD work which is concerned with theory and practice relationships in clinical or field-based settings (Anang & Florio-Ruane, 1984; Schultz & Yinger, 1982).

Thus, while the knowledge disseminator role which characterizes much of conventional TE/SD (Weil, 1985) can be accurately characterized as "professional work assignments and routines that demand minimal intellectual flexibility and breadth and require, instead, conformity and limited analysis" (Lanier, 1984, p. 29), this TE/SD inquirer role implies something of a much different order. The very same reflective dialogue, analysis, and continuous experimentation which were posited as desirable goals for classroom teachers should characterize the teacher educator and staff developers who are active in these programs which focus on the relationship of research and practice (Simmons & Sparks, in press). This has corresponding implications for the professional knowledge, skills and attitudes of teacher educators and staff developers.

That this is a complex issue which extends even to the level of the hidden curriculum in TE/SD programs is very capably and thoughtfully discussed by Wisniewski (1984), e.g. do TE/SD students actually study research methodologies and collect data themselves or do they passively listen to classroom research findings? Are they rewarded or discouraged for asking questions which don't have simple answers? That attention is rarely given to the relationship between research and practice or to the nature of the appropriate relationship between research and practice in developing most traditional or innovative TE/SD programs has been documented by Anderson (1982) and Champion (1984a, 1984b) and discussed by Weil (1985).

The inevitable and unfortunate outcome of these factors has been a TE/SD curriculum which has been described as based on a view of teachers as "technicians" rather than as professionals who are to be knowledgeable, autonomous, and committed instructional decision-makers (Lanier, 1982). The interaction of this "technician" based TE/SD curriculum with less than professional school workplace conditions for teachers (Schlechty & Vance, 1983), and conflicting expectations and inadequate professional backgrounds for teacher educators/staff developers themselves has been a powerful handicap for the TE/SD field as a whole as well as for particular TE/SD institutions which have sought to direct their limited resources at these more complex TE/SD goals which are identified earlier in this paper.

The other unfortunate outcome of traditional TE/SD explicit and hidden curriculum has been to produce generations of classroom practitioners who not only don't understand the role of research and theory in the day-by-day demands of their own work, but who are in some cases, openly disdainful of theory and research as "irrelevant" to them as classroom teachers. (This situation has also been influenced by other historical and political factors such as those discussed by Grinder, Hartwell, and Norris (1982).) Not quite as dramatic, but equally or perhaps more damaging, are all of the attitudes of "guilt" and "inferiority" which some of our conventional TE/SD programs engender because of the indirect message that researchers have all the answers and are, therefore, superior to the practitioner. This is as crippling to the development of autonomous, knowledgeable, committed, professional classroom practitioners as is the current school workplace described by Lanier (1982) as top heavy with administrators who are viewed as holding some hierarchical position of superiority over classroom teachers.

There are some interesting and promising exceptions to this general pattern, and they will be the focus of the next section of the literature review.

Action research and inquiry-oriented, professionalizing TE/SD: There is a small but growing body of literature available concerning TE/SD which would emphasize the development of inquiry skills and professional perspectives in teachers as the desirable program outcomes. This literature finds its roots in the ideas of John Dewey (1904) and in what is written concerning the conditions needed for teaching to be a profession (Corrigan, 1981; Howsam, Corrigan, Denemark, & Nash, 1976; Lanier, 1982). This literature includes critical analyses of current practices and proposed new directions and rationales (e.g. Champion, 1984a; Feiman, 1980; Gideonse, 1984; Johnston, 1984; Nolan, 1982; Tymitz-Wolf, 1984; Zahorik, 1981; Zeichner, 1983) as well as analytical descriptions of particular TE/SD programs whose processes and outcomes attempt to implement and test these goals (e.g. Cohn, 1981; Erdman, 1983; Haigh & Katterns, 1984; Myers & Stallings, 1984; Shultz & Yinger, 1982; Simmons, 1984a).

In discussing four alternative paradigms of teacher education, Zeichner (1983) provides an excellent explanation of what is being called inquiry-oriented, professionalizing TE/SD in this paper.

> The final orientation to teacher education to be explored in the present paper is one which prioritizes the development of inquiry about teaching and about the contexts in which teaching is carried out. According to the advocates of this approach, the focus on fostering the development of orientations and skills of critical inquiry does not imply that technical skills of teaching are somehow seen as unimportant. On the contrary, the assumption underlying this approach is that technical skill in teaching is to be highly valued not as an end in itself, but as a means for bringing about desired ends. Questions about what ought to be done take on primary importance and the process of critical inquiry is viewed as a necessary supplement to the ability to carry out the tasks themselves.
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> As Wehlage (1981) correctly points out, there has been a long history in U.S. teacher education of efforts to promote the development of "inquiry-oriented" teacher education. Conceptualizations have been developed and programs have been implemented which have as their central aim the development

> of "habits of inquiry." For example, there have been proposals for the development of "teacher innovators" (Joyce, 1972), "teacher scholars" (Stratemeyer, 1956), "teachers as inquirers" (Bagenstos, 1975), "teachers as action researchers" (Corey, 1953), "teachers as participant observers" (Salzillo & Van Fleet, 1977), and "self-monitoring teachers" (Elliot, 1976-77). Although these proposals differ substantially on their definitions of inquiry, they all represent attempts to prepare teachers who have the skills to do and the inclination and skill to analyze what they are doing in terms of its effects upon children, schools and society (see also Cohn, 1979; Feiman, 1979; Tom, 1981; Wright, 1978; Zeichner, 1981; Zeichner & Teitelbaum, 1982). [...]
>
> The fundamental task of teacher education from this point of view is to develop prospective teachers' capacities for reflective action (Dewey, 1933) and to help them examine the moral, ethical and political issues, as well as the instrumental issues, that are embedded in their everyday thinking and practice. The teaching of technical skills associated with inquiry (e.g., observation skills) and the fostering of a disposition toward critical inquiry (a "critical spirit") becomes the axis around which the preparation revolves. The development of technical skill in teaching and the mastery of content knowledge is always addressed within this broader framework of critical inquiry and is viewed as a process of mastery that will bring about worthwhile ends. (p. 5-6)

In this same article, Zeichner also poses the question of the relationship of a TE/SD program, its institutional form, and the social context of it and schooling in general. This question (which has no simple answer) re-emphasizes what was said earlier in this paper about concern for the effects of the hidden as well as the explicit curriculum of TE/SD. These hidden curriculum effects are created, in part, by the nature of the instructional strategies, activities, and materials used in TE/SD programs and by the knowledge, attitudes, and skills of teacher educators and staff developers themselves. Champion (1984a) speaks to this issue in this way:

> Sharon Feiman-Nemser (1980) has proposed that growth and reflection become procedural aims for teacher education, recognizing that such "commitment to reflection and growth represents a major departure from conventional views about teaching teachers and major trends in research on teaching" (p. 133). In a recent article, Feiman-Nemser described efforts in teacher education centered around process goals. She emphasized that "Growth and reflection do not lend themselves to short-term interventions or simple techniques" (p. 140).
>
> One can extrapolate that if Feiman-Nemser's proposal, and John Dewey's earlier (1904), were to become reality in teacher education curricula, students of teaching would have to become more deliberately and actively involved in hypothesizing, problem-solving, collecting data,

> and the like throughout their professional programs. These aims clearly would not compartmentalize well. Hypothesizing 201 and Problem-solving 202 followed by Reflection 310 would be missing the point. If growth and reflection were real procedural aims, lists of findings from research become merely one of the many tools with which the teacher educator works and not ends in themselves.
>
> Gary Fenstermacher (1980) recently proposed that extracting critical teaching skills from the effectiveness research is not the paramount issue. He suggested that students of teaching need role models of the manner in which to deal with new ideas, to question, to ponder, to inquire, and to solve problems. In Fenstermacher's view, it would be very important for teacher educators to be keenly aware of the manner in which they link knowledge from research---as ammunition, as rules for teaching, or as another kind of evidence to consider. (p. 90-91)

Action research is one of the best known approaches to the sort of inquiry-oriented professionalizing TE/SD which has been just described. Action research has its roots beginning in the 1940's in the work of Kurt Lewin who sought to bring researchers and practitioners together in a collaborative relationship to engage in a variety of applied research projects designed to address pressing social problems. The essence of applied research methodology was used---a cyclical process of fact finding as a basis for identifying problems and goals, the implementation of a (action) strategy for solving the problem, evaluation of the effects of the plan as implemented, and reformulation of the new problem and goals in order to recycle the process (Ketterer, Price, & Politser, 1980). Such an approach sought to challenge and modify the traditional role of researchers and practitioners as separate groups and to increase the relevance and usefulness of research in helping to bring about social improvements. The other purpose, that of involving practitioners in action research about problems they had identified in their own work, was intended to develop in them the knowledge and skills necessary, and beliefs in their own efficacy to solve problems and to gradually improve practice in their own settings.

Stephen Corey was among the first to use action research in the field of education. Corey described action research in this way: "The process by which practitioners attempt to study their problems scientifically in order to guide, correct, and evaluate their decisions and actions..." (1953 p. 6). Corey believed that the value of action research would be in the degree to which it led to improved educational practices and that the generalizations which emerged would appropriately be limited to that specific situation, not to a broad, similar population. Such a cooperative relationship between teachers and researchers would provide a support group in which members could risk change and experimentation and provide a greater range and variety of perceptions from which the study and specific plans for action and change could benefit (Smulyen, 1983). He outlined a series of cyclical steps for the action research process---definition of the problem statement of some hypotheses or questions to investigate, design and implementation of an appropriate treatment, data collection and analysis, and conclusions---which paralleled those of Lewin earlier.

In the years since Corey, action research has risen and fallen in its use and acceptance (Smulyan, 1983). It has been criticized as scientifically weak in its methodology, actually harmful or at least over promising its goal of improving school practices, and as impractical in reliance on a collaborative relationship between researchers and practitioners who have different perspectives, norms, and work demands (Hodgkinson, 1957; Kemmis, 1980). Sanford (1970) points out that the surge of federal money spent on social and educational problems beginning in the 1960's served to further deepen the chasm which existed between researchers and practitioners because the funding model was one which directed substantial amounts of money at researcher-managed research studies.

Smulyan (1983) states that these influences served to increase and redirect the use of action research in the 1970's toward practitioner-initiated studies in which researchers served as consultants. Through the influence of several forces, including the teacher center movement (Devaney, 1977) and the emergence of a more developmental and clinical approach to staff development (Berliner, 1978), teachers have been encouraged to pursue their own meaningful professional development opportunities. This emphasis on teacher empowerment and capacity building is related also to the issues surrounding school workplace conditions (Schlechty & Vance, 1983) and the emergence of teaching as a profession (Lanier, 1982).

> Practitioner involvement in action research also addressed growing concerns during the 1970's that traditional staff development programs did not meet teacher needs. Action research would provide teachers with the opportunity to gain knowledge and skill in research methods and applications and to become more aware of options and possibilities for change (Tickunoff, Ward, & Griffin, 1979). Teachers participating in action research would become more critical and reflective about their own practice. Elliott (1977) quotes one teacher involved in an action research program who said, "Indeed, the value of this research to us may be in the analysis the teachers make of their methods and their whole approach to teaching" (p. 13). Teachers' heightened perceptions and understanding gives them greater control over their own behavior and makes them independent of others for professional growth (Elliott, 1977; Mosher, 1974; Pine, 1981). McLaughlin and Marsh (1978) saw staff development through action research as a model for professional growth and an ongoing process of problem-solving and program building within a school. (Smulyan, 1983, p. 9 - 10)

Several recent projects and reports attest to the revival of action research in the 1970's and 1980's as a means of both TE/SD and school improvement and of knowledge generation. These examples would include the work done by Clark & Florio-Ruane (1984), Hord (1981), Huling (1981), Little (1981), Oja & Pine (1983), Simmons (1984b), and Tikunoff, Ward, and Griffin (1979). In addition, Lieberman and Miller (1984) and Tikunoff and Mergendoller (1983) provide helpful summaries and analyses of various projects and outcomes in sites where action research has been used.

Sumlyan (1983) has developed an excellent synthesis and analysis of four issues related to action research: the teacher and researcher roles, the expectations and outcomes related to staff development for teachers, the conditions necessary for collaborative action research, and the problems which occur in conducting such

projects. The focus here in concluding the literature review will be on the professional development outcomes which could be hypothesized to occur or which have been found to occur with teachers participating in action research activities. (The parallel and equally fascinating question of the effect of such collaborative action research work on teacher educator/staff developers will be put aside for another investigation).

An analysis of the literature indicates that the professional development effects for teachers participating in action research projects could include the following outcomes: (1) acquiring new knowledge concerning effective teaching-learning-schooling; (2) acquiring new knowledge concerning research; (3) changes in thinking skills, habits, or styles (e.g. problem-solving skills, cognitive complexity or flexibility, level of cognitive development); (4) changes in attitudes toward themselves as teachers (e.g. beliefs concerning their own professional efficacy); (5) changes in attitudes toward the need for on-going professional development for themselves as teachers; (6) changes in attitudes toward research and its usefulness for themselves as teachers; (7) changes in attitudes toward the process of change; (8) changes in patterns of communication and colleagiality; (9) development of new theories of action concerning their work as classroom teachers; (10) changes in actual teacher practices in either the classroom and/or school; and (11) changes in student knowledge, behavior, or attitudes in the classroom and/or school.

There is actual empirical support for some of these participant outcomes, while in other cases, these exist as hypotheses which are logically linked to work done in related studies of TE/SD or school improvement programs. A few studies will be cited to substantiate the list above and to guide the reader further. In general, these participant outcomes are only beginning to be investigated, so much work remains yet to be done in this area (Simmons, 1984a).

Huling (1981) found that the teachers who participated in an interactive research and development project (IR & D), another term for collaborative action research, demonstrated significantly greater changes in concerns about the use of research findings and practices and higher research-teaching-development skills than a group of similar teachers who did not participate in the IR & D project. The IR & D teachers did demonstrate a positive attitude about the use of research findings and practices in teaching. However, they did not demonstrate a significantly higher interest in professional development than the other group of teachers. In the same study, significant changes in student behavior and attitudes in the classroom of the participating teachers were reported.

Changes in participants' patterns of colleagiality, communication, and networking with other educators in the workplace have been reported by Little (1981), and the potential importance of this as a means of school-wide improvement noted.

Sanders and McCutcheon (1984) report on the development of new or the gradual evolution of previous "theories of action" which teachers possess. They explain these as "the conceptual structures and visions that provide our reasons for acting as we do and for choosing the activities, curriculum materials, and other things that we choose in order to be effective" (p. 5). This notion of a teacher's "theories of action" would seem to imply integrated changes in a teacher's knowledge of effective teaching-learning-schooling and his/her sense of professional efficacy and purpose.

The work of Oja (1983) and Pine has involved studying the processes as well as the outcomes of participation in action research. Their study has been designed using ATI case study methodology as well as ethnographic approaches to examine the system-wide impact of the collaborative action research project which they directed. Their study conclusions state: "this study has documented the teacher's ability to assume multiple perspectives, utilize a wider variety of coping behaviors in response to school and team pressures, employ a broader repertoire or group process and change strategies and be "more effective" in many collaborative research decisions because of the ability to be self-reflective, self-evaluative, and interpersonally sensitive" (Oja, 1983, p. 182). The result of this participation, according to Pine (1981) is that teachers become more flexible in their thinking, are more open to new ideas, and are more able to solve new problems in the future.

This literature review has sought to identify and analysize the issues surrounding the appropriate use of research in TE/SD programs and to develop a basis for examining the purposes and potential of action research as a means of providing inquiry-oriented, professionalizing TE/SD for classr om teachers. This paper will turn next to a description of the participants and their action research projects experience which are being investigated in this study.

DESCRIPTION OF INVESTIGATION AS CONDUCTED

Subjects. The subjects in this study are 20 experienced classroom teachers who have been participating in a year-long TE/SD treatment which will be described below. This group of teachers includes various subject matter specializations and levels of K - 12 teaching responsibilities in both public and private school settings and represent a wide variety of high-middle-low SES characteristics and geographic locations ranging from inner city to suburban to small town/rural schools.

Data were collected from 17 of these 20 program participants. In one case, a participant was unavailable for date collection, and two individuals joined the group in mid-stream, and hence, did not experience the same full treatment with the others. At the time that data were collected (i.e. when the treatment was nearly completed), 5 of these 17 participants had finished or were just in the process of finishing their action research projects, and hence, these individuals' data reflect the full treatment brought to closure. The other 12 participants are doing more longitudinal projects (due to the nature of their investigation questions and treatment being studied) and are generally planning to collect and analyze their data at the end of the 1984-85 school year. The teacher journal data for these 5 will be analyzed separately from the other 12 in order to see if differences exist.

The 17 subjects used in this study range in age from 25 to 50 years old with an average age of 35.4 years. There are 3 men and 14 women involved. The number of years of their teaching experience ranges from 3 to 27 years with an average of 11.8 years. Two participants had had grade level or subject area reassignments, and were in that sense, "first year" teachers as they began their projects. With the exception of one pair of people who teach in the same school building (but different departments of a junior high school), none of the participants shared the same school workplace setting.

Inquiry-oriented, professionalizing staff development treatment. The year-long treatment implemented was provided as part of the required core courses---6 credits of TE 870: Classroom Analysis (winter 1984 and spring 1984 terms) and 6 credits of TE 871: Instructional Development (summer 1984 and fall 1984 terms)---associated with the Master of Arts in Classroom Teaching degree program offered by Michigan State University. In this case, these experiences were offered through one of the University's field-based Teacher Education Centers. The treatment was provided by this researcher (note: this is a realistic limitation to the study) who is a regular faculty member in the University's Department of Teacher Education. She has 10 years of experience as a field-based teacher educator in working with both preservice and inservice teachers.

As was stated earlier in this paper, the treatment involved: (1) analytical study of the teaching-learning process occurring in their own classrooms using frequent and incrementally more comprehensive data gathering and professional self-analysis exercises, (2) opportunities for networking among teachers from different backgrounds and work settings, and (3) a culminating action research project done in their own classroom or school settings. A lengthy and detailed analysis of these experiences is available in Simmons & Sparks (in press) and Simmons (1984a & b).

In general, this year long experience focuses particularly on providing the opportunity for participants to study the processes and products of educational research related to effective teaching, learning, and schooling and, in collaboration with other classroom teachers and a staff developer/instructor, to reflectively consider their present classroom practices and professional development strengths and needs in light of that. They consider this research in relation to the diverse learner and community needs with which they work, their previous professional knowledge and beliefs, their current practices, the school workplace conditions, and current issues facing educators today.

For many classroom teachers, Classroom Analysis is their first concentrated exposure to educational research, so the first few sessions are spent talking and reading about teaching as a profession and the teacher's role as an instructional decision-maker. The need for teachers to be lifelong learners and to make instructional decisions using the most comprehensive and accurate information possible are emphasized. Finally, the use of instructional problem-solving skills (actually very similar to action research methodology) is explained and demonstrated using several examples from everyday classroom teaching events. The value of engaging in professional self-analysis and in identifying professional development goals and resources is further supported by briefly considering the rapidly changing nature of society itself and recent adult development research.

Participants begin early in their Classroom Analysis experience to also conduct their own research by completing a survey methodology project. This project as well as some other integrative and reflective exercises done during the first few sessions are designed to develop a sense of individual readiness, group support, and a professional climate to thoughtfully analyze their work as classroom teachers.

The remainder of the 22 session Classroom Analysis experience is designed to provide participants with the necessary knowledge, skills, and attitudes as well as actual experience in analyzing specific aspects of the teaching and learning process occurring in their classrooms in the following categories:

- curriculum design, implementation, & evaluation
- organization & allocation of instructional resources
  (e.g. time, space, materials)
- teacher & learner expectations
- classroom management
- classroom & school learning climate
- teacher & learner verbal communication
  (e.g. verbal flow, questions, reinforcement, directions)
- teacher & learner non-verbal communication

In each case, current as well as previous research on effective teaching and learning in diverse K - 12 classroom teaching situations is read, discussed, and used as a basis for collecting and analyzing actual data from the participant's own teaching situation in order to identify each person's professional development strengths and needs.

These readings (Simmons, 1984-85) and group sessions are designed to acquaint participants with several things from the world of educational research (Clark, 1984)---e.g. (1) constructs or names for important variables in the teaching/learning/school process, (2) research questions which can be asked about those variables, (3) theoretical models which show hypothesized or established relationships between variables, (4) research methodology or processes of inquiry in order to determine answers to the research questions, and (5) research findings or answers to those questions which have been asked. In addition, (6) the names, places, and historical contribution various researchers themselves as individuals and as members of a large network of educational inquirers and (7) the limitations and assumptions of various methodologies and the researchers who use them become familiar to Classroom Analysis participants.

In organizing these readings, group sessions, and data gathering and analysis exercises for each topic, care has been taken to use a progressively more integrative recall-comprehension-application-analysis-synthesis-evaluation structure so that participants' understanding as well as confidence and skills are gradually developed and strengthened.

As several of these types of exercises are done for each of the Classroom Analysis units mentioned above, participants are gradually expanding their understanding of the teaching/learning/schooling process while gaining experience and confidence in a new role (i.e. action researcher in their own classrooms) and acquiring a more ambitious and profound view of themselves as professionals rather than classroom technicians. At the same time, they are gradually accumulating a professional self-analysis mosaic of themselves, of their genuine strengths as classroom teachers, and of their needs and future goals and resources for professional growth.

The focus of the next two term experience, Instructional Development, is for the participants to carry out an action research project in order to develop practical solutions and increased understanding of specific classroom problem which they have identified as salient in their particular classroom and learner situation. After the Classroom Analysis experience, participants usually can identify several possible areas which they would like to investigate in further depth, but to provide some

focus and to be realistic in terms of the practical limitations of change theory, one area is eventually selected by each person. Doing this project involves further use of the information and conceptual skills acquired in Classroom Analysis.

Instruction and supervision for these action research projects are provided by the staff developer through group sessions, individual conferences, written feedback, and classroom site visits as appropriate. In order to organize ideas and to improve communication skills with other educators, participants prepare a written project proposal and a final report which are made available to others through the local Center library. These reports include: (1) a description of the designated instructional problem and its context and the research questions which the project has been designed to explore, (2) a review of related research and other appropriate resources, (3) explanation of the methods used to investigate the problem, (4) summary and analysis of the data gathered, and (5) conclusions and any possible recommendations resulting from the project. In addition, they are asked to comment on the impact of the project on their own professional development and work as a classroom teacher.

The diversity of instructional problems which are addressed by these action research projects is quite amazing, but reflects the fact that participants are to identify something which is relevant to their particular situations. Examples of some problems investigated are:

- career education and selection for junior high girls
- moral reasoning development in pre-adolescents
- classroom management rules, procedures, & consequences
- intensive feedback and praise for low achieving adult students
- reorganization & expansion of language arts curriculum
- cooperative learning strategies
- increased communication between teacher & parents
- strategies to enhance adolescent self-concept
- reading comprehension
- listening skills
- pre-vocational curriculum for handicapped students

Often, these projects relate to other professional development experiences the participants have had or can now identify to pursue. A strong emphasis is placed on networking among group members and other building and district colleagues who can function as valuable resources on a particular topic. They go back and reread things which are on their own book shelves and seek out new information in outside sources including ERIC, the local Teacher Education Center library, and community resources.

This additional experience of reading, discussing, thinking, using and assessing things from research---i.e. the constructs, questions, methodology, theoretical models, findings, researchers' examples, and limitations and assumptions which were mentioned earlier in this article---further expands the professional analytical skill development process which was begun during Classroom Analysis. Rather than providing specific prescriptive "right answers", the staff developer's use of phrases such as, "what does that suggest to you?", "Can you think of another way of seeing that?", and "what other important factors influence this situation?", are all intended to empower teacher participants to see connections, deepen their understandings, and seek out resources in their own environment.

Data collection & analysis procedures. The data necessary to answer the first two research questions posed in this study were gathered by means of (1) 2 questionnaires (one for the end of the Classroom Analysis experience and one for the end of the Instructional Development experience) with Likert-scale response options and (2) a structured journal writing method of data collection. In the structured journal writing situation, participants were asked to write for half an hour on two different occasions which were two weeks apart and which were near the end of the treatment period. They were asked to respond to the following question:

> In what specific ways have you been influenced by the experience of systematically and reflectively analyzing your own practices as a classroom teacher in light of research regarding the teaching-learning process? These influences can include new as well as the further evolution of already existing things.

The language in this question was deliberately intended to be as general and non-suggestive as possible.

The third question will be answered by the researcher in light of the richness of the participant journal and questionnaire data actually gathered in comparison with other data collection methodologies which could be appropriately used.

The data in each case are limited to self-report, and hence, must be viewed in light of both the restrictions of accuracy and honesty as well as the strength of the immediacy and personal quality of that data.

The participant questionnaire data will be tabulated in terms of frequencies. The journal writing data will be content analyzed using standard procedures recommended for this type of methodology.

DATA SUMMARY & ANALYSIS

The participant questionnaires each contained items which assessed the degree to which participants felt the particular course goals had been achieved for them. The questionnaire items were actually rewordings of each set of course objectives. The items and participant response frequencies are shown in TABLES 1 and 2.

These data indicate quite strongly that these participants believe that there have been positive increases in (1) their knowledge concerning effective teaching-learning; (2) their knowledge and skills concerning research; (3) their reflective thinking habits; (4) their attitudes toward the need for on-going professional development for themselves as teachers; (5) their skills in identifying professional development goals for themselves; and (6) their overall effectiveness as educators. These would correspond with the effects which were identified in the literature review of this paper.

Table 1

Classroom Analysis Experience (24 respondents)

Key: SA=strongly agree
GA=generally agree
MA=mildly agree
?=uncertain
D=disagree

		SA	GA	MA	?	D
32.	The course has helped me to become a more reflective educator.	17	7	0	0	0
33.	This course has helped me to become a more effective educator.	15	8	1	0	0
34.	In general, this course has been valuable in developing my skill in objective data collection and analysis comparing specific aspects of my own teaching situation to the above findings concerning effective teaching and learning.	17	6	1	0	0
35.	In general, this course has been valuable in developing my knowledge of valid research methodology and findings related to effective teaching and learning for various K-12 classroom teaching situations and diverse pupil groups.	18	6	0	0	0
36.	In general, this course has been valuable in developing my skill in identifying professional development goals for self as a result of the above process and resource planning for achieving those goals.	13	10	1	0	0
37.	In general, this course has been valuable in developing a positive attitude toward (a)the concept of teaching as application of research/theory into practice, (b)the role of educators and educational institutions in promoting equity in a pluralistic society, and (c)the need for my own lifelong self-sustained professional development efforts.	20	4	0	0	0

Table 2

Instructional Developmental Experience (16 respondents)

Key: S=superior
AA=above average
AV=average
BA=below average
I=inferior

	S	AA	AV	BA	I
29. In general, how valuable have the course and your project been in developing your skill in assessing your strengths and areas of further need in your own professional knowledge, performance, and attitudes and the teaching-learning process occurring in your classroom?	8	6	2	0	0
30. In general, how valuable have the course and your project been in developing your skill in using action research methodology and the instructional problem-solving process as a means of continuous professional development and of increasing the effectiveness of the teaching-learning process in your classroom?	8	6	2	0	0
31. In general, how valuable have the course and your project been in developing your knowledge of research findings relevant to the identified focus of your professional development project and your skill in translating these findings into instructional practice?	9	6	1	0	0
32. In general, how valuable have the course and your project been in developing your professional level of competency in reading, analytical thinking, speaking, and writing skills, thus enabling you to appropriately utilize professional development resources and to communicate effectively with other classroom practitioners and school administrators concerning instructional improvement strategies?	8	5	3	0	0

Table 2 continued

	S	AA	AV	BA	I
33. In general, how valuable have the course and your project been in developing in you a positive attitude toward the concept of teaching as application of theory into practice and the need for your own lifelong, continuous professional development efforts?	11	3	2	0	0

Key: SA=strongly agree
GA=generally agree
MA=mildly agree
?=uncertain
D=disagree

	SA	GA	MA	?	D
37. The course has helped me to become a more reflective educator.	13	3	0	0	0
38. This course has helped me to become a more effective educator.	11	4	1	0	0

Content analysis of the participants' structured journal writing responses was carried out by the researcher using the themes and constructs which emerged from the responses themselves. As these were identified and clarified, frequency counts were tallied for each time a theme was mentioned. These are presented in TABLE 3.

These results indicate that there is evidence that the participants believe that there has been an influence on their: (1) thinking skills (in terms of reflective habits, general and specific problem-solving skills, and greater flexibility); (2) attitudes toward themselves as professionals and sense of their own efficacy as teachers; (3) attitudes toward the need for on-going professional development for themselves; (4) attitudes toward the process of change; (5) communciation with colleagues; (6) own theories of action regarding their work as teachers; (7) actual classroom practices with children.

As the staff developer/instructor who provided the treatment, the researcher has had numerous group and one-to-one interactions with the participants over the time period of a year and a quarter since this cohort began the Classroom Analysis experience. Some of these interactions have occurred in individual conferences with participants about their action research projects (one such conference is suggested every two months). During these conferences, many comments, of course, concerning the same sort of themes are expressed. This could suggest that systematic data collection obtained from interviews would be an additional, or even superior method, of obtaining participants' insights about the impact that this SD experience was having on them. This would allow for further probing of ideas expressed, too. This alternative has some appeal in terms of a belief that classroom teachers are perhaps more verbal than writing oriented in general. This alternative, however, is more costly than questionnaires and journal writing.

CONCLUSIONS & RECOMMENDATIONS

This study has sought to investigate the impact of assuming the role of action researcher in one's own classroom as an example of inquiry-oriented, professionalizing staff development. It is only a preliminary study which has been designed to explore program impact and certain methodological questions which are being addressed more comprehensively in a subsequent, more longitudinal manner (Simmons, 1984a).

The results of this study would seem to support the types of outcomes which others involved in doing action research with classroom practioners have found. The outcomes associated with participants' changes in specific classroom practices, in thinking skills and habits, in professional self-concept, in use of SD resources, and in colleagial communication habits and skills are worthy of further enhancement and investigation. The re-emergence of action research opportunities for classroom teachers in various sites across the country is an exciting prospect, indeed, for the individuals involved, for the future of TE/SD programs, and for the efforts to improve both research and practice in the field of education.

TABLE 3

themes mentioned:	responses from 5 participants who had completed projects	responses from 12 participants who had not yet completed projects
• greater awareness and critical stance toward own classroom actions	9	14
• increase in problem-solving skills; have become more analytical in general	2	7
• specific changes in instructional behaviors and materials	13	21
• more tolerant of children's differences and feelings	1	1
• more eager to try new things in teaching, to seek ou SD resources	7	14
• more aware of SD resources	2	1
• more eager and confident in professional reading	2	6
• increase in communication with colleagues	4	11
• more secure and clear about my strengths as a teacher and professional efficacy	7	8
• clearer, more aware, and more confident of own theories of action	4	11
• recognize positive role of research in education	2	2
• greater understanding of profession and responsibilities	3	6
• took leadership role in an SD experience	1	2

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